Nurses' Utilization and Perception of the Community/Public Health Nursing Credential

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Objectives. I explored the underutilization of the community/public health nursing (C/PHN) credential by examining the individual characteristics of public health nurses, the value these nurses perceive for certification, the barriers they perceive to obtaining or maintaining a C/PHN credential, and their credential status.

Methods. I surveyed a national sample of 655 public health nurses regarding this more than 20-year-old credential. I analyzed variables related to perceived value, barriers, and characteristics of public health nurses.

Results. The perceived value of credentialing did not differ among public health nurses relative to whether they had ever had a C/PHN credential. The C/PHN credential, however, was obtained significantly more often by public health nurses in academic settings than by those working in practice settings.

Conclusions. The C/PHN credential appears to be disproportionately underutilized and unknown to public health nurses in the practice community. Findings suggest, however, that utilization could be improved by increasing the credential's visibility outside of academic environments and by establishing system-level changes that provide external recognition, such as salary increases and career advancement, for specialty credentials. (*Am J Public Health.* 2009;99:944–949. doi:10.2105/AJPH.2008.150029)

Several public health disciplines have developed certification or registration programs during the past century. These include the Registered Environmental Health Specialist or Registered Sanitarian (REHS/RS) credential in 1937, the Community Health Education Specialist (CHES) certification in 1989, the Public Health and General Preventive Medicine certification (for physicians) in 1983, and certification for public health nursing in the early 1980s. In recent years, discussion has increased regarding the potential benefits of a system for credentialing the general public health workforce, and indeed, the first public health credentialing exam was given in August 2008.[1] At the same time, a lack of empirical research has left the public health community divided on the perceived value, benefits, and barriers related to credentialing as an appropriate measure for ensuring a competent workforce.[2–5] Researchers and public health leaders involved in establishing the broader public health research agenda recognize that little substantive research has been conducted regarding the benefits of a credentialed workforce and the structures most effective for supporting the process.[3,6,7] As a result, research regarding credentialing has been made a national agenda item.[8]

The limited empirical evidence regarding credentialing is largely positive, and published commentaries overwhelmingly describe it as a constructive investment. Commentaries regarding health profession–related credentialing frequently cite personal benefits for the credentialed professional such as increased job satisfaction, challenge, and personal achievement.[9,10] The actual research studies related to empirically measuring this, however, have been varied and inconclusive.[11–15]

Whereas little conclusive research evidence exists regarding the value of credentialing, even less research has been conducted regarding the barriers to obtaining or maintaining a credential. Published commentaries indicate that specific barriers to credentialing include challenges related to cost, agreement on standards, workforce acceptance, and workforce diversity.[3,16] Only limited and inconclusive research has been conducted on these issues.[17]

Several studies have profiled credentialed specialty groups[12,18,19] and have examined differences between credentialed and noncredentialed professionals.[9,12–15,19,20] None of these studies examined public health nurses, but their findings suggest the potential for relations to exist between individual characteristics of nurses or public health workers, how they perceive the value of and barriers to credentialing, and whether they are credentialed. The research literature suggests that workplace role (as a frontline staff nurse),[12] race and ethnicity (as a nonminority),[21] geographical setting (in a nonrural area),[22] age (as an older professional),[9,21] and education (having less-advanced education)[19] can positively affect how nurses value credentialing and might have significant positive relations with credential status.[22]

As discussions related to the credentialing of public health nurses and the broader public health workforce widen, it has become even more critical to understand the perceived value of credentialing to public health workers and the factors related to what supports or hampers the utilization of specialty credentials in public health. Public health nurses have had access to a specialty credential for more than 20 years. In 2005, however, nurses recognized for their specialization in public health through credentialing faced the potential discontinuation of their credentialing process because of low participation rates.[23] No one knows exactly why this public health nursing credential has been underutilized and what this could mean for efforts to credential the broader public health workforce. To date, the Community/Public Health Nursing (C/PHN) credential has largely survived its 2005 threat of discontinuation but has not seemingly achieved its full potential for acceptance among a broad constituency of nurses in our public health workforce. Nurses make up the largest single discipline in public health,[24] and lessons can be learned from them regarding the

implementation of a broader public health worker credential.

Based on a review of the literature and ongoing national discussions, I designed a survey and used cross-sectional research methods to examine relations between the individual characteristics of public health nurses, the value they perceive for certification in general, the barriers they perceive to obtaining or maintaining a C/PHN credential, and their credential status. I expected that identifying apparent differences between those who obtained the credential and those who did not would help to explain some of the underutilization of this established credential.

METHODS

I collected anonymous data in March 2006 through a self-report, Web-based survey instrument titled the Value of a Community/Public Health Nursing (C/PHN) Credential. The survey included a value scale, a barriers scale, and demographic questions. The value scale assessed the respondents' perceived value of nursing certification and was measured with the well-tested 18-item Perceived Value of Certification Tool (PVCT), used with permission from the scale authors. Respondent answers for each item ranged from strongly agree to strongly disagree.[25] Reports on the reliability of the PVCT indicated that it had consistently attained α scores of 0.90 or more.[25,26] I modified an existing survey tool from the National Certification Board of Pediatric Nurse Practitioners and Nurses to develop a 16-item barriers scale that measured perceived barriers to obtaining and maintaining a C/PHN credential.

The respondent sample of 655 was made up of public health nurse members of the listserves of any of the 4 organizations of the Quad Council of Public Health Nursing Organizations: the Public Health Nursing Section of the American Public Health Association (http://www.apha.org/membergroups/sections/aphasections/phn), the American Nurses Association's Congress on Nursing Practice and Economics (http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/NewCNPE.aspx), the Association of Community Health Nurse Educators (http://www.achne.org), and the Association of State and Territorial Directors of Nursing (http://www.astdn.org). As a result of their affiliations with national organizations, the participants were perceived to be a representative sample of public health nurses in positions of some level of veteran or emerging leadership and with some awareness of broad public health nursing issues.

Individual Characteristics

According to the available literature, several characteristics of public health nurses are potentially related to their perceptions of the value of credentialing, the barriers they perceive regarding the C/PHN credential, and their credential status. Therefore, I examined the workplace role, population size of the work setting, and the age, race/ethnicity, and education of the participants.[9,12,19,21,22] These characteristics were measured largely as categorical or ordinal variables captured through demographic data. Some of the variables (i.e., education, professional role, workplace, race/ethnicity) were ultimately adapted during the analysis to combine similar responses and create dichotomous variables for ease of interpretation. Finally, the credential status of each participant was also collected and defined dichotomously as having ever obtained a C/PHN credential at the basic (undergraduate level) or advanced (postmaster level)—either currently holding the credential or having held it previously—or as having never obtained the credential.

Perceived Value of Credentialing

The perceived value placed on credentialing was measured with the PVCT by using the same factors identified by Sechrist et al.[26]—personal or intrinsic value and external or extrinsic recognition by others—and had an α score of 0.948. After exploratory factor analysis was conducted and the number and type of factors were confirmed, the respondents were given continuous scores for each of the 2 identified factors related to the perceived value of credentialing. The intrinsic value factor represented what respondents perceived to be the level of personal value related to challenge, satisfaction, and growth provided to public health nurses by credentialing. The extrinsic value factor represented the level of external value related to market and professional recognition provided to public health nurses by credentialing.[27]

Perceived Barriers Related to Credentialing

The frequency and ranking of barrier items that participants perceived in relation to obtaining and maintaining the C/PHN credential were used to develop respondents' barrier-intensity scores. The number of times a barrier item was chosen from among the 16 barriers determined the frequency of an item being chosen. The average ranking assigned to a barrier item by participants determined that item's overall ranking. Barrier-intensity scores were determined by the degree to which specific barriers were ranked most highly and most often by respondents. Ultimately, the barrier intensity scores represented 2 features of the data: the frequency with which a respondent indicated items and the nature of how the study sample as a whole ranked the items. This approach took into account how many items a respondent checked an item, what items they checked, and what items they did not check. This approach was supported by the broad range of scores and the normal distribution curve that the resulting data produced.

Ultimately, the scales for the perceived value of credentialing and for the perceived barriers to obtaining and maintaining a C/PHN credential produced 3 continuous scores for each participant: intrinsic value, extrinsic value, and barrier intensity. I used these 3 scores to further examine which factors might be associated with lack of utilization of the credential.

RESULTS

Although mostly White and middle aged or older, the participants in the study represented public health nurses working in a variety of settings, practicing in a variety of roles, serving rural and urban communities, and representing several racial/ethnic groups (Table 1).

Pearson correlation analysis of the variables under examination indicated significant moderate to high correlations between the intrinsic and extrinsic value scores ($r=0.667$; $P<.001$) and between the value and barrier scores (extrinsic value and barrier intensity: $r=-0.317$; $P<.001$; intrinsic value and barrier intensity: $r=-0.252$; $P<.001$). No significant correlations existed, however, between those

TABLE 1—Sample Characteristics and Demographic Data of Public Health Nurses: 2006

	No. (%)
Age, y	
<40	70 (11.0)
40–49	116 (18.3)
50–59	324 (51.0)
≥60	125 (19.7)
Total	635 (100)
Population size of work setting	
Urban	489 (76.3)
Rural	146 (22.8)
Frontier	6 (0.9)
Total	641 (100)
Professional workplace	
Local health department	195 (29.9)
State health department	56 (8.6)
Community clinic	15 (2.3)
College or university	286 (43.9)
Federal agency	11 (1.7)
Other[a]	89 (13.7)
Total	652 (100)
Profession	
Staff or field nurse	91 (14.0)
Management or administration	197 (30.3)
Academia or research	283 (43.5)
Other[b]	80 (12.3)
Total	651 (100)
Race/ethnicity	
Non-Hispanic White	549 (83.8)
Hispanic or racial minority[c]	106 (16.2)
Total	655 (100)
Highest degree obtained	
Associate	11 (1.7)
Undergraduate	123 (18.8)
Master's	312 (47.8)
PhD	207 (31.7)
Total	653 (100)
C/PHN credential status	
Ever credentialed	131 (20.0)
Never credentialed	524 (80.0)
Total	655 (100)

Note. C/PHN = Community/Public Health Nursing.
[a]Most of the participants who indicated "other" worked in a practice-oriented, nonacademic setting (e.g., hospital, home care).
[b]Most of the participants who indicated "other" worked in practice-oriented roles (e.g., nurse practitioner or provider, epidemiologist, consultant).
[c]Category includes Hispanic, American Indian/Alaska Native, Asian, African American, and Native Hawaiian or Pacific Islander.

scores and any individual characteristics of the respondents. Several of the individual participant characteristics were significantly correlated with each other. In particular, each of the following characteristics were correlated with a participant having obtained a C/PHN credential: holding a graduate degree ($r=0.131$; $P<.001$), having a professional role in academia or research ($r=0.151$; $P<.001$), and working in a college or university ($r=0.152$; $P<.001$).

Study participants valued credentialing in terms of the 2 factors identified in previous applications of the value scale[27]: for its personal (intrinsic) contributions to one's professionalism and for its market (extrinsic) value in advancing careers. In terms of agreement with the individual value scale items themselves, respondents were mainly (90.1%) in agreement with the 12 statements related to the intrinsic or personal value related to credentialing. Respondents were less in agreement (70.0%) with the 6 statements regarding the extrinsic value of credentialing to public health nurse careers.[27] The biggest barrier to C/PHN certification identified by the respondents was the lack of financial benefits related to credentialing. Barrier items related to a perceived lack of external recognition (including financial) were identified as particular obstacles to nurses in terms of wanting to obtain and maintain C/PHN certification.[27] Findings regarding the credentialing value factors, barrier scores, and individual scale items assessed in this study are described in detail elsewhere and reflect similar value findings from usage of the PVCT with other types of nurses.[27]

Despite the national affiliations of the sample, 21.7% of the respondents had never heard of the C/PHN credential. I conducted χ^2 analyses with each of the individual characteristics of the respondents to examine group differences among those who were aware of the existence of the C/PHN credential and those who were not. The significant differences among several of these individual characteristics, after similar response choices were combined (e.g., master's and doctorate degrees combined to "graduate degree"), are shown in Table 2. The χ^2 tests indicated that there was a significant difference between participants who had heard of the C/PHN credential and those who had never heard of it in terms of their educational attainment, professional role, professional workplace, and race/ethnicity.

In terms of the variables representing perceived value and perceived barriers, the 1-way analysis of variance tests conducted with those groups who indicated that they had obtained a C/PHN credential and those who had not indicated that there were no significant differences between these respondents in terms of their perceptions of the value of and barriers to credentialing. When the same tests were conducted with each of the other individual characteristic variables and then again with individual characteristic variables whose like-response choices had been combined (i.e., education, professional role, workplace, race/ethnicity), there were no significant differences among the various types of respondent groups in terms of their continuous value and barriers scores.

Noncredentialed public health nurses in my study differed significantly from their C/PHN credentialed counterparts for only the 4 demographic variables shown in Table 3, when examined via the Pearson χ^2 test. Those who had never obtained a C/PHN credential were significantly more likely to not have a graduate degree, to have a Bachelor of Science in Nursing (BSN) as their highest nursing degree, be a staff nurse or manager, and be working outside of academia in a practice setting such as a state or local health department or community clinic.

Among participants working in academic settings, 25.7% (n=26) of those with master's degrees and 28.5% (n=51) of those with PhDs as their highest academic preparation had obtained a C/PHN credential (Table 4). Among participants working in practice settings, 16.6% (n=35) of those with master's degrees and 21.4% (n=6) of those with PhDs had obtained a C/PHN credential. Those who were credentialed and had an undergraduate degree as their highest academic preparation (10.6%; 13 credentialed out of 123 with undergraduate degrees) all indicated that they were working in a practice setting outside of a college or university.

DISCUSSION

Several findings from this study could be interpreted as helping to explain the

TABLE 2—Differences Between Public Health Nurses Who Had and Had Not Heard of the Community/Public Health Nursing (C/PHN) Credential: 2006

Characteristic	Total, No.	Had Heard of Credential, No. (%)	Never Heard of Credential, No, (%)	χ^2	*T*	*P*
Total		511 (78.0)	142 (21.7)			
Have a graduate degree				98.99	–1.11	<.05
Yes	520	449 (86.3)	71 (13.7)			
No	133	62 (46.6)	71 (53.4)			
Professional role[a]				45.28	–1.28	<.05
Academia or research	283	256 (90.5)	27 (9.5)			
Staff or management	370	255 (68.9)	115 (31.1)			
Professional workplace[b]				54.92	–1.30	<.05
College or university workplace	286	262 (91.6)	24 (8.4)			
Workplace in practice setting	367	249 (67.8)	118 (32.2)			
Race/ethnicity				16.95	–1.33	<.05
Non-Hispanic White	548	444 (81.0)	104 (19.0)			
Hispanic or Racial minority	105	67 (63.8)	38 (36.2)			

[a]Participants who indicated their role was "academia/research" were coded as 1 and grouped into the academia or research category. Those who indicated their role was "staff/field nurse," "management/administration," or "other" were coded as 0 and grouped into the staff or management category.
[b]Participants who indicated their workplace was a "college or university" were coded as 1 and grouped in the college or university workplace category. Those who indicated their workplace was any other option listed were coded as 0 and grouped into the workplace in practice setting category.

underutilization of the C/PHN credential. Although study participants seemed to view the personal and professional value of certification to a similar (and high) degree as do nurses in fields other than public health, it appears that the systems in which public health nurses practice were not perceived as providing external recognition and reward to public health nurses who pursue certification.[27] Also, and perhaps most strikingly, almost 22% of the survey participants were not aware that the C/PHN credential existed, even those who were seemingly interested enough in their own professional growth or national issues to be members of a national public health nursing organization. Public health nurses in the sample with lesser academic preparation, who worked in local health departments, who were staff-level nurses or managers, or who represented a racial/ethnic minority group were significantly less likely to have ever heard of C/PHN certification than were their counterparts.

The sheer lack of awareness regarding the C/PHN credential, particularly among the nurses in practice-level positions and settings and those who represented racial/ethnic minority groups, could explain much of the underutilization of this credential. When participant members of racial/ethnic minority groups had heard of the credential, they were certified at a rate proportionate to their White counterparts. Although the numbers of minority participants were small, this finding suggests that these participants—when they had heard of credentialing—were as interested as their nonminority counterparts in obtaining a C/PHN credential.

Although this study did not distinguish between the basic (undergraduate level) and advanced (postmaster level) C/PHN certificates, it is noteworthy that qualifications for the Advanced C/PHN Certificate require a minimum of a master's degree in nursing. Nonetheless, respondents who had graduate degrees and who worked in practice settings, regardless of academic preparation, had consistently smaller proportions of participants who had ever obtained any C/PHN credential when compared with their counterparts in academic settings.

Public health nurses working in practice settings, at a staff or management level, or without advanced degrees, were significantly less likely to have been credentialed, indicating an apparent systematic lack of utilization of the C/PHN credential among those in frontline and vital practice settings and with less than a master's degree. These findings indicate a disproportionate lack of knowledge about a credentialing opportunity that is otherwise seemingly valued among those in practice-based settings and among ethnic and racial minority colleagues in the public health nurse workforce. Given the broader professional perspective and awareness that one might expect from this type of sample, these findings likely underestimate the lack of awareness among the general public health nurse workforce of the C/PHN credential.

Limitations

The use of a cross-sectional, self-report survey design has limitations in that only a snapshot of perceptions and experiences related to credentialing for a limited sample is obtained. No changes over time could be measured in this study, and individual perceptions could not be externally validated.

In terms of demographic data, the respondents were asked whether they had ever held the basic or advanced C/PHN credential, but they were not asked whether they had ever had the credential and let it lapse. As a result, credential status could only be analyzed in terms of respondents having ever had or never had the C/PHN credential. Similarly, it was not possible to distinguish between respondents who had obtained a basic versus an advanced C/PHN credential. A more sensitive measure that took lapsed credentials and the type of credential into account would better delineate participant perceptions of the value of and barriers to credentialing. (Note that the Basic C/PHN Certificate exam was discontinued by the American Nurses Credentialing Center in 2007, but data collection for this study was conducted before its termination. The Advanced C/PHN Certificate exam is still being given.)

Conclusions

The cross-sectional, exploratory survey research described here was intended to supplement the inadequate evidence base regarding

TABLE 3—Differences Between Public Health Nurses Who Had and Had Not Obtained Community/Public Health Nursing (C/PHN) Credential Status: 2006

Characteristic	Total, No.	Had Obtained Credential, No. (%)	Had Not Obtained Credential, No, (%)	χ^2	*t*	*P*
Total		131 (20.0)	524 (80.0)			
Have a graduate degree				11.17	3.36	<.05
Yes	521	118 (22.6)	403 (77.4)			
No	134	13 (9.7)	121 (90.3)			
Have graduate nursing degree				17.42	4.22	<.05
Yes	434	107 (24.7)	327 (75.3)			
No	221	24 (10.9)	197 (89.1)			
Professional role[a]				14.63	3.86	<.05
Academia or research	283	76 (26.9)	207 (73.1)			
Staff or management	372	55 (14.8)	317 (85.2)			
Professional workplace[b]				15.21	3.94	<.05
College or university workplace	286	77 (26.9)	209 (73.1)			
Workplace in practice setting	369	54 (14.6)	315 (85.4)			

[a]Participants who indicated their role was "academia/research" were coded as 1 and grouped into the academia or research category. Those who indicated their role was "staff/field nurse," "management/administration," or "other" were coded as 0 and grouped into the staff or management category.
[b]Participants who indicated their workplace was a "college or university" were coded as 1 and grouped in the college or university workplace category. Those who indicated their workplace was any other option listed were coded as 0 and grouped into the workplace in practice setting category.

credentialing. Survey results from respondents in this study can be used to direct planning related to the long-term potential for credentialing among public health nurses, as well as among the broader public health workforce, and as an evidence base for addressing barriers to credentialing in public health.

This study indicates that C/PHN credentialing is disproportionately attained by public health nurses who are in (or end up in) academic settings and is particularly underutilized among and unknown to those in the practice community. At the same time, it appears that public health nurses place high intrinsic value on the attainment of specialty credentials,[27] regardless of their credential status or work setting. This suggests that increasing the visibility of the C/PHN credential, especially to racial/ethnic minority nurses and to those outside of academic environments, could substantially increase the utilization of C/PHN certification. Increased visibility, however, should be coupled with broader institutional and system-level changes that provide external recognition, such as salary increases, career advancement, better marketability, and employer acknowledgment of public health nurses with specialty certification. There is no reason to believe that other plans to credential public health workers would not need to exercise the same efforts to develop or maintain adequate and equitable utilization of a national specialty certificate. ■

TABLE 4—Number of Public Health Nurses Who Had and Had Not Obtained the Community/Public Health Nursing (C/PHN) Credential, by Workplace Setting and Degree: 2006

	Total, No.	Had Obtained Credential, No. (%)	Had Not Obtained Credential, No. (%)
Total		131 (20.0)	524 (80.0)
Public health nurses in academic workplaces[a]			
Associate degree	0	0 (0)	0 (0)
Undergraduate degree	5	0 (0)	5 (100)
Master's degree	101	26 (25.7)	75 (74.3)
PhD degree	179	51 (28.5)	128 (71.5)
Public health nurses in practice workplaces[b]			
Associate degree	11	0 (0)	11 (100)
Undergraduate degree	118	13 (11.0)	105 (89.0)
Master's degree	211	35 (16.6)	176 (83.4)
PhD degree	28	6 (21.4)	22 (78.6)

[a]Academic workplace represents participants who indicated their workplace as "college or university."
[b]Practice workplace represents participants who indicated their workplace as any option provided other than "college or university."

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Contributors

B. Bekemeier originated the study and conducted all of the related data collection and analysis.

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Human Participant Protection

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